

TWO NEW SPECIES OF *TENTHREDO SIMLAENSIS* GROUP (HYMENOPTERA, TENTHREDINIDAE) FROM CHINA

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Abstract The species of *Tenthredo simlaensis* group is briefly discussed. The diagnosis of the species group and the differences between *T. simlaensis* group and *T. pedicellus* group are also discussed. Two new species of *Tenthredo simlaensis* group from China are described: *Tenthredo pseudoformosula* Wei et Shang, sp. nov. and *Tenthredo transversiverticina* Wei et Shang, sp. nov. *Tenthredo melanosternum* Saini & Vasu, 1999 and *Tenthredo segrega* Konow, 1908 are recorded firstly from China. *Tenthredo rubrocaudata* Takeuchi, 1936, syn. nov., is a new junior synonym of *Tenthredo eburata* Konow, 1900.

***Tenthredo pseudoformosula* Wei et Shang, sp. nov.**
(Figs 1–10)

This new species is similar to *Tenthredo formosula* Wei, 2002 but differs from the latter species in scape yellow green in both sexes, the upper inner orbit in female with a distinct green stripe; the mesepisternum entirely yellow green; the lateral process of female sternite 7 short and broad; the middle serrulae weakly elevated; the lateral black stripes on male tergites not narrower than the middle green stripe; the apex of penis valve round. In *Tenthredo formosula*, scape black in both sexes, the upper inner orbit in female entirely black; the ventral half of mesepisternum black; the lateral process of female sternite 7 longer; the middle serrulae much more elevated; the lateral black stripes on male tergites much narrower than the middle green stripe; the apex of penis valve distinctly tapering.

Holotype ♀, Jiuzhaigou (alt. 2 500 m), Sichuan, 16 July 2001, WEI Mei-Cai leg. Paratypes: 2 ♀♀, Erlong River (35° 23' N, 106° 21' E; alt. 1 945 m), Mt. Liupan, Ningxia, 5 July 2008, LIU Fei leg.; 1 ♀, Erlong River (alt. 1 945 m), Mt. Liupan, Ningxia, 16 July 2008, LIU Fei leg.; 1 ♀, Mt. Taiyang (34° 25' N, 105° 46' E; alt. 1 620 m), Maiji Forestry Centre, Mt. Xiaolong, Gansu, 7 July 2009, FAN Hui leg.; 1 ♀, Mt. Maiji (alt. 1 606 m), Tianshui City, Gansu, 21 May 2006, YANG Jing leg.; 3 ♀♀, Mt. Taibai (alt. 1 580 m), Shaanxi, 12 July

2007, ZHU Xun leg.; 16 ♀♀, Jialingjiang (alt. 1 617 m), Shaanxi, 14 July 2007, JIANG Xiao-Yu leg.; 16 ♀♀, Jialingjiang (alt. 1 617 m), Shaanxi, 16 July 2007, ZHU Xun leg.; 1 ♂, Jialingjiang (alt. 1 570 m), Shaanxi, 26 May 2007, JIANG Xiao-Yu leg.; 1 ♀, Qingfengxia (alt. 1 473 m), Taibai Country, Shaanxi, 3 July 2008, ZHU Xun leg.; 3 ♀♀, Jiwozi (alt. 1 765 m), Chang'an District, Shaanxi, 27 June 2008, JIANG Xiao-Yu leg.; 2 ♀♀, Jiwozi (alt. 1 765 m), Chang'an District, Shaanxi, 27 June 2008, ZHU Xun leg.; 1 ♂, Jiwozi (alt. 1 720 m), Chang'an District, Shaanxi, 23 May 2008, YU Hai-Li leg.; Dabagou (alt. 1 320 m), Liuba County, Shaanxi, 20 May 2007, ZHU Xun leg.; 1 ♀, 1 ♂, Yingpan Town (alt. 1 390 m), Liuba County, Shaanxi, 26 May 2007, JIANG Xiao-Yu leg.; 1 ♀, Foping County (alt. 1 000 m–1 450 m), Shaanxi, 17 May 2005, LIU Shou-Zhu leg.; 1 ♂, Foping County (alt. 1 000 m–1 450 m), Shaanxi, 17 May 2005, LIU Shou-Zhu leg.; 2 ♀♀, Jiuzhaigou (alt. 2 500 m), Sichuan, 16 July 2001, WEI Mei-Cai leg.; 1 ♀, Honghuaduo (alt. 1 200 m), Shenlongjia, Hubei, 3 July 2007, NIE Mei leg.; 1 ♀, Honghuaduo (alt. 1 200 m), Shenlongjia, Hubei, 3 July 2007, WEI Mei-Cai leg.; 1 ♀, Xiaolongtan (alt. 1 800 m), Shenlongjia, Hubei, 4 July 2007, WEI Mei-Cai leg.; 5 ♀♀, Yazikou (alt. 1 241 m), Shenlongjia, Hubei, 19 July 2008, ZHAO Fu leg.; 2 ♀♀, Caiqi (alt. 1 981 m), Shenlongjia, Hubei, 21 July 2009, ZHAO Fu leg.; 1 ♀, Yiyu River (alt. 2 046 m), Shenlongjia, Hubei, 9 July 2008, ZHAO Fu leg.; 1 ♀, Dalongtan (alt. 2 114 m), Shenlongjia, Hubei, 9 July 2008, ZHAO Fu leg.; 1 ♀, Pingqiangangou (alt. 2 604 m), Shenlongjia, Hubei, 12 June 2008, ZHAO Fu leg.; 1 ♀, Mt. Guanmen (alt. 1 267 m), Shenlongjia, Hubei, 2 July 2009, ZHAO Fu leg.; 1 ♀, Mt. Guanmen (alt. 1 580 m), Shenlongjia, Hubei, 21 May 2010, LI Zejian leg.; 1 ♂, Qianjiaping (alt. 1 530 m), Shenlongjia, Hubei, 22 May 2010, LI Ze-

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Jian leg.; 1 ♀, Qianjiaping (alt. 1 789 m), Shennongjia, Hubei, 7 July 2009, JIAO Zhao leg.

Etymology. The specific epithet is composed of *pseudo-* and *formosula*, as the new species is very similar to *T. formosula* in body colour but much different in genitalia.

***Tenthredo transversiverticina* Wei et Shang, sp. nov.**

(Figs 11–17)

This new species is close to *T. simlaensis* Cameron, 1899 but differs from the latter in the postorbit, supraclypeal area, supraantennal tubercles, postocellar area, ventral corner of pronotum, prescutum black; the yellow green band on mesepisternum not reaching anterior margin; the abdominal tergites 1–8 each with a small triangular middle spot which is much narrower than lateral black stripes; the postocellar area 2.5 times as broad as long; the third antennomere 1.1 times as long as fourth antennomere; the mesepisternum densely microsculptured without distinct punctures, mat; the mesonotum minutely punctured and with distinct microsculptures between punctures; mesoscutellum with low transverse ridge; the posttergite 2 times as broad as long and about 2 times diameter of lateral ocellus in length; the middle serrulae weakly elevated. In *T. simlaensis* Cameron a broad

stripe on postorbit, supraclypeal area, supraantennal tubercles, postocellar area, ventral corner of pronotum, posterior of prescutum yellowish green; the yellow green band on mesepisternum broadly reaching anterior margin; the abdominal tergites 1–8 each with a broad quadrate middle macula which is as broad as lateral black stripes; the postocellar area 1.6 times as broad as long; the third antennomere 1.3 times as long as fourth antennomere; the mesepisternum with large and sparse punctures, without microsculpture, shiny; the mesonotum sparsely punctured and without microsculptures between punctures; mesoscutellum roundly elevated, without transverse ridge; the posttergite 3 times as broad as long and about 1.3 times diameter of lateral ocellus in length; the middle serrulae strongly elevated.

Holotype ♀, Jiuzhaigou, alt. 2 500 m, Sichuan, 16 July 2001, WEI Mei-Cai leg. **Paratypes**: 1 ♀, Dangchuan Farm, alt. 1 480 m, Mt. Xiaolong, Qinzhou District, Gansu, 17 June 2009, FAN Hui leg.; 1 ♀, Jialingjiang, alt. 1 570 m, Shaanxi, 26 May 2007, ZHU Xun leg.; 1 ♀, Tongyu Town, alt. 1 052 m, 30 May 2006, ZHU Xun leg.

Etymology. The specific epithet refers to the very short and broad postocellar area of the species.

Key words Tenthredinidae, *Tenthredo simlaensis* group, new species, new record, new synonym.

中国叶蜂属双带种团（膜翅目，叶蜂科）二新种和二新纪录种及一新异名

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摘要 简要讨论了叶蜂科叶蜂属双带种团的分类状况、主要识别特征及其与近缘种团的区别。记述双带种团2新种：绿柄双带叶蜂 *Tenthredo pseudoformosula* Wei et Shang, sp. nov. 和短顶双带叶蜂 *Tenthredo transversiverticina* Wei et Shang, sp. nov.。蓝光双带叶蜂 *Tenthredo melanosternum* Saini & Vasu, 1999 和角斑双带叶蜂 *Tenthredo segregata* Konow, 1908 是中国新纪录种。建立1个新异名关系：*Tenthredo eburata* Konow, 1900 = *Tenthredo rubrocaudata* Takeuchi, 1936, syn. nov.。

关键词 叶蜂亚科，叶蜂属双带种团，新种，新纪录，新异名。

中图分类号 Q969.542.6

叶蜂属双带种团 *Tenthredo simlaensis* group 是叶蜂属的一个小型种团，包括本文记述的2个新种，目前已知约15种。其中 *T. eburata* Konow, 1900 分布于古北区北部 (Taeger et al., 2010)。印度分布6种，1种为印度特有种：*T. laevissima* Malaise, 1945, *T. segregata* Konow, 1908, *T. occipitalis* Malaise, 1945, *T. simlaensis* Cameron, 1899, *T. melanosternum* Saini & Vasu, 1999 和 *T. harpeata* Singh, 1985 (= *Tenthredo*

jalouriensis Singh & Saini, 1987) (Saini, 2007)。日本分布2种：*T. ornataria* Shinohara, 1994, *T. shishikuensis* Togashi, 1963。东西伯利亚和朝鲜分布2种：*T. eburata* Konow 和 *T. nigrolateralis* Malaise, 1931。

中国已经记载5种，其中3种目前仅发现于中国：红尾双带叶蜂 *Tenthredo eburata* Konow, 1900，列纹双带叶蜂 *Tenthredo elegansoma* Wei, 1998，方斑双带

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叶蜂 *Tenthredo formosula* Wei, 2002, 时氏双带叶蜂 *Tenthredo shii* Wei, 1998, 等斑双带叶蜂 *Tenthredo simlaensis* Cameron, 1899 (Wei *et al.*, 2006)。

双带种团的主要识别特征是:腹部背板具两列纵向黑斑,背板中央条斑、背板缘折以及腹板全部黄绿色;触角窝上突后端与额脊间无横沟;后颊脊下端正常,不呈平台状扩展。本种团与 *T. pediculus* 种团非常近似,腹部斑纹属于同一类型,但 *T. pediculus* 种团的后颊脊下端显著呈平台状扩展、触角窝上突通常后端突然中断。

本文报道中国 2 新种和 2 新纪录种。新种正模和大部分副模标本保存于中南林业科技大学昆虫模式标本室 (CSCS), 其中 *Tenthredo pseudoformosula* 的 2 个副模标本保存于美国史密森研究院自然历史国家博物馆 (National Museum of Natural History, Washington, DC, USA, USNM)。论文研究中检视的部分标本保存于日本大阪府立大学昆虫标本馆 (OPU) 和德国昆虫研究所 (SDEI)。

1 绿柄双带叶蜂, 新种 *Tenthredo pseudoformosula* Wei et Shang, sp. nov. (图 1~10)

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雌虫 体长 11~12 mm (图 1)。体黄绿色, 头部背侧大斑及相连的内眶下半部 (图 3)、头部后侧、触角梗节及鞭节全部、前胸侧板上缘狭边、中胸背板前叶大椭圆形斑、侧叶大部 and 盾侧凹大部、后胸背板凹处和淡膜区侧脊、中胸侧板缝狭条斑、腹部背板两侧窄条斑、锯鞘边缘黑色; 腹部背板黑色条斑宽度约 2.2 倍于淡膜区宽, 间距约 2 倍于黑色条带宽。足黄绿色, 中后足股节中部背侧狭条斑、胫跗节背侧条斑黑色。翅透明, 翅痣黄绿色, 前翅脉大部和其他翅脉黑褐色。体背侧细毛和锯鞘毛灰褐色, 腹侧细毛银色。

体光滑, 光泽较强; 头部背侧凹部具细弱刻纹, 无刻点; 后眶下端刻纹较密; 中胸背板具细小、稍密集的刻点, 刻点间隙具明显刻纹, 光泽稍弱; 小盾片后坡具浅弱刻点和刻纹, 光泽较暗淡; 附片光滑; 中胸侧板无刻点, 具明显细刻纹和油质光泽, 后侧片光滑; 腹部背板均具微细刻纹。

体较窄长。唇基平坦, 基部明显宽于复眼下缘间距, 前缘缺口宽浅, 弧形或亚三角形, 深约唇基 1/4 长, 侧叶端部斜截 (图 4); 颞眼距 0.8 倍于中单眼直径; 触角窝上突低弱隆起, 与低钝的额脊完全融合, 无界限; 中窝较深, 与明显凹陷的额窝贯通; 复眼内缘向下强烈收敛, 间距 0.5 倍于复眼长径; 单眼后沟窄深, 中沟宽深; 单眼后区明显隆起, 宽 2.5 倍

于长; 侧沟短深, 向后稍分歧; 背面观后头两侧弧形强烈收缩, 0.35 倍于复眼长 (图 3); 后颊脊完整, 下部无褶皱。触角丝状, 等长于前缘脉, 约等长于头胸部与腹部 1、2 节之和, 第 3 节 1.2 倍于第 4 节长, 第 8 节长宽比等于 2.3 (图 5)。

中胸背板前叶中沟明显; 小盾片圆形隆起, 无纵横脊或顶尖; 附片宽大, 无纵脊, 中部微隆起; 中胸前侧片中部低钝角状隆起, 顶部稍凹, 腹侧无腹刺突; 后胸后侧片后角圆钝。前翅 cu-a 脉位于 1M 室下缘内侧 1/3; 2Rs 室约等于 1R1 与 1Rs 室之和; 后翅臀室无柄式。后足胫节内端距 0.4 倍于后足基跗节长; 后足基跗节不膨大, 等长于其后 3 跗分节长, 跗垫小型; 爪无基片, 内齿稍短于外齿。产卵器侧面观稍短于前足胫节, 微长于后足基跗节, 锯鞘端 1.5 倍于锯鞘基长, 末端稍突出 (图 6)。锯腹片 22 锯齿 (图 7), 锯齿倾斜突出, 中部锯齿具 1~2 个内侧亚基齿和 4~6 个外侧亚基齿, 亚基齿细小, 不规则; 节缝刺毛带狭窄, 刺毛稀疏, 基部起第 6~8 锯齿 (图 8)。

雄虫 体长 10~11 mm (图 2); 体色和构造类似雌虫, 但头部背侧黑斑较大, 内眶全部黑色; 腹部背板黑色带斑等宽于带间距 (图 2); 复眼下缘间距 0.4 倍于复眼长径, 颞眼距 0.5 倍于中单眼直径; 下生殖板宽稍大于长, 端缘钝截型; 生殖袂 (图 9), 抱器短宽, 亚三角形, 基部宽, 端部渐窄; 阳茎瓣 (图 10), 骨化弱, 头叶长椭圆形, 无刺突。

正模 ♀, 四川九寨沟 (海拔 2 500 m), 2001-07-16, 魏美才采。副模: 2 ♀ ♀, 宁夏六盘山二龙河 (海拔 1 945 m), 2008-07-05, 刘飞采; 1 ♀, 宁夏六盘山二龙河 (海拔 1 945 m), 2008-07-16, 刘飞采; 1 ♀, 小陇山麦积林场太阳山 (海拔 1 620 m), 2009-07-07, 范慧采; 1 ♀, 甘肃天水麦积山 (海拔 1 606 m), 2006-05-21, 杨菁采; 3 ♀ ♀, 陕西太白山 (海拔 1 580 m), 2007-07-12, 朱巽采; 16 ♀ ♀, 陕西嘉陵江源头 (海拔 1 617 m), 2007-07-14, 蒋晓宇采; 16 ♀ ♀, 陕西嘉陵江源头 (海拔 1 617 m), 2007-07-14, 朱巽采; 1 ♂, 陕西嘉陵江源头 (海拔 1 570 m), 2007-05-26, 蒋晓宇采; 1 ♀, 陕西太白县青峰峡 (海拔 1 473 m), 2008-07-03, 朱巽采; 3 ♀ ♀, 陕西长安区鸡窝子 (海拔 1 765 m), 2008-06-27, 蒋晓宇采; 2 ♀ ♀, 陕西长安区鸡窝子 (海拔 1 765 m), 2008-06-27, 朱巽采; 1 ♂, 陕西长安区鸡窝子 (海拔 1 720 m), 2008-05-23, 于海丽采; 1 ♀, 陕西留坝大坝沟 (海拔 1 320 m), 2007-05-20, 朱巽采; 1 ♀, 1 ♂, 陕西留坝营盘乡 (海拔 1 390 m), 2007-05-21, 朱巽采; 1 ♀, 陕西佛坪, 海拔 1 000 m ~

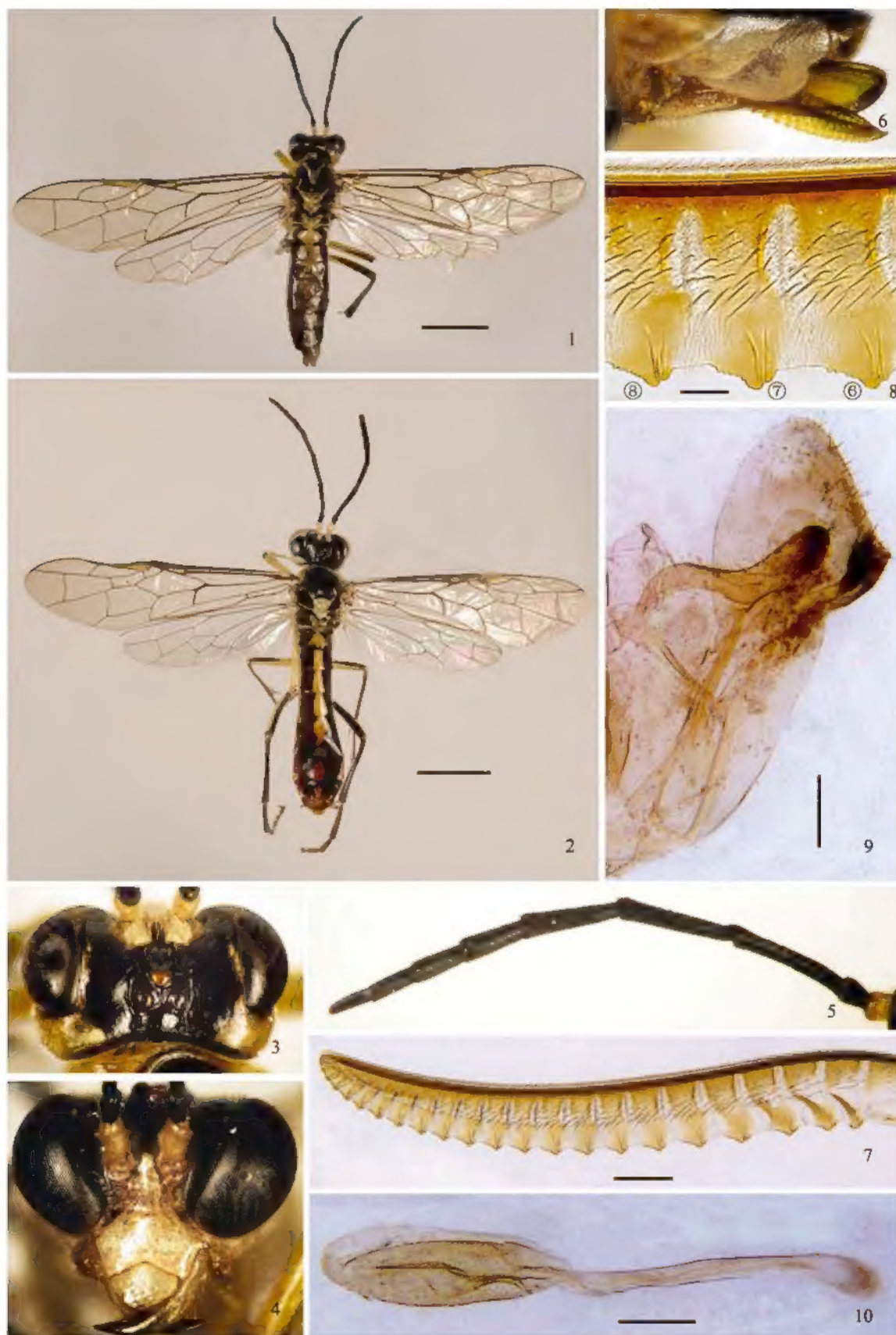


图 1~10 绿柄双带叶蜂, 新种 *Tentredo pseudoformosula* Wei et Shang, sp. nov.

1~2. 成虫 (adult) 3~4. 头部 (head) 5. 触角 (antenna) 6. 锯鞘侧面观 (ovipositor sheath, lateral view) 7. 锯腹片 (lancet) 8. 第 6~8 锯刃 (6th - 8th serrulae) 9. 生殖铗 (gonoforceps) 10. 阳茎瓣 (penis valve) 1~3. 背面观 (dorsal view) 1, 3~5. 雌 (female) 2. 雄 (male) 比例尺 (scale bars): 1~2 = 2 mm, 7 = 200 μ m, 8 = 50 μ m, 9~10 = 100 μ m

1 450 m, 2005-05-17, 刘守柱采; 1 ♂, 陕西佛坪 (海拔 1 000 m ~ 1 450 m), 2005-05-17, 刘守柱采; 2 ♀♀, 四川九寨沟 (海拔 2 500 m), 2001-07-16, 魏美才采; 1 ♀, 湖北神农架红花朵 (海拔 1 200 m), 2007-07-03, 聂梅采; 1 ♀, 湖北神农架红花朵 (海拔 1 200 m), 2007-07-03, 魏美才采; 1 ♀, 湖北神农架小龙潭 (海拔 1 800 m), 2007-07-04, 魏美才采; 5 ♀♀, 湖北神农架鸭子口 (海拔 1 241 m), 2008-07-19, 赵赴采; 2 ♀♀, 湖北神农架彩旗 (海拔 1 981 m), 2009-07-21, 赵赴采; 1 ♀, 湖北神农架阴峪河 (海拔 2 046 m), 2008-07-09, 赵赴采; 1 ♀, 湖北神农架大龙潭 (海拔 2 114 m), 2008-07-09, 赵赴采; 1 ♀, 湖北神农架坪壩干沟 (海拔 2 604 m), 2008-06-12, 赵赴采; 1 ♀, 湖北神农架官门山 (海拔 1 267 m), 2009-07-02, 赵赴采; 1 ♀, 湖北神农架官门山 (海拔 1 580 m), 2010-05-21, 李泽建采; 1 ♂, 湖北神农架千家坪 (海拔 1 530 m), 2010-05-22, 李泽建采; 1 ♀, 湖北神农架千家坪 (海拔 1 789 m), 2009-07-07, 焦墨采。

分布: 中国 (宁夏、甘肃、陕西、四川、湖北)。

词源: 新种种名源自拉丁前缀 *pseudo*-和 *formosula* 构成, 因其体色与方斑双带叶蜂 *Tenthredo formosula* Wei, 2002 很近似, 因此命名。

鉴别特征 本种与方斑双带叶蜂 *Tenthredo formosula* Wei, 2002 最近似, 但两性触角柄节黄绿色; 雌虫内眶上半部具黄绿色条斑, 中胸侧板全部黄绿色; 雌虫腹部第 7 腹板后缘中突两侧突叶宽圆、较短; 锯腹片锯齿隆起度较低; 雄虫腹部背板黑色带斑不窄于带间距, 阳茎瓣端部圆钝等, 与后者不同 (*Tenthredo formosula* 的触角柄节黑色; 雌虫内眶全部黑色, 中胸前侧片腹侧半部黑色, 腹部第 7 腹板后缘中突两侧突叶窄长; 锯腹片锯齿隆起度较高; 雄虫腹部背板黑色带斑显著窄于带间距, 阳茎瓣端部较尖)。

2 短顶双带叶蜂, 新种 *Tenthredo transversiverticina* Wei et Shang, sp. nov. (图 11 ~ 17)

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雌虫 体长 12 mm (图 11)。体大部黑色; 上颚大部、上唇、唇基、前胸背板后角、翅基片、中胸小盾片前坡、附片、后胸淡漠区、后胸小盾片及后侧三角形斑、中胸前侧片中部宽横斑 (前端未伸抵侧板前缘)、后下侧片大部、后胸前侧片、后胸后侧片后缘、腹部 1 ~ 8 背板中部小三角形斑、背板缘折全部和腹板全部、锯鞘除边缘外, 黄绿色; 足黄绿

色, 中足胫节中端部外侧和跗节背侧条斑、后足胫节背侧宽条斑、后足胫跗节大部黑色。翅透明、翅痣和翅脉黑褐色, 前缘脉基部浅褐色。体背侧细毛褐色, 腹侧细毛银色。

体光滑, 无粗刻点; 头部背侧和后眶具细刻纹, 额区刻纹较明显; 中胸背板具细小、稍密集的刻点, 刻点间隙具微细刻纹; 小盾片后坡刻纹密集, 光泽弱; 附片高度光滑; 中胸前侧片刻纹细密, 光泽弱; 中胸后上侧片刻纹较密, 后下侧片和后胸侧板刻纹微弱; 腹部各节背板具明显细刻纹。

唇基微弱隆起, 明显宽于复眼下缘间距, 端缘缺口弧形, 深度约 0.3 倍于唇基长, 侧叶端部斜截型 (图 13); 上唇近似圆形; 复眼下缘间距 0.5 倍于复眼长径, 额眼距 0.8 倍于中单眼直径; 触角窝上突微弱隆起, 后端与低钝的额脊完全融合, 无界限; 中窝宽浅, 与凹陷的额区贯通; 单眼中沟宽深, 后沟窄深; 单眼后区明显隆起, 宽 2.5 倍于长, 无中纵脊; 侧沟短, 深直, 向后平行; 背面观上眶约等长于复眼的 1/3, 后两侧显著收缩 (图 12); 后颊脊完整, 下部无褶。触角长丝状, 稍长于前翅 C 脉, 等长于腹部, 第 3 节 1.12 倍于第 4 节长, 第 8 节长宽比等于 2.5 (图 14); 小盾片圆钝隆起, 宽大于长, 具低钝横脊, 无纵脊和顶尖; 附片平坦, 宽长比等于 2, 长约 2 倍于单眼直径, 无纵脊; 中胸前侧片中部低钝锥形隆起, 顶部不尖, 无凹窝, 腹侧无腹刺突。后足胫节内端距 0.35 倍于后足基跗节长; 后足基跗节细长, 不膨大, 等长于其后 3 跗分节长, 跗垫微小; 爪基片钝弱, 内齿稍短于外齿。产卵器 0.8 倍于前足胫节长, 约等于后足基跗节长, 鞘端 1.7 倍于鞘基长, 侧面观端缘圆钝, 背顶角稍突出 (图 15)。前翅 cu-a 脉位于 M 室基部 1/3, 2r 脉位于 2Rs 室外侧 2/3, 2Rs 室 0.9 倍于 1R1 和 1Rs 之和; 后翅臀室无柄式。腹部第 7 腹板后缘中突两侧向后梯形延伸; 锯腹片狭长, 具 16 锯齿 (图 16), 锯齿微弱倾斜突出, 基部 1 ~ 5 锯齿刃纹孔线不明显, 6 ~ 16 锯齿刃孔线明显且较短; 中部锯齿具 1 ~ 2 个内侧亚基齿和 12 ~ 13 个外侧亚基齿, 亚基齿细弱, 大小较均匀; 节缝刺毛带狭窄, 节缝刺毛短小稀疏; 基部起第 6 ~ 8 锯齿 (图 17)。

雄虫 未知。

正模 ♀, 四川九寨沟, 海拔 2 500 m, 2001-07-16, 魏美才采。副模: 1 ♀, 甘肃秦州小陇山党川林场 (海拔 1 480 m), 2009-06-17, 范慧采; 1 ♀, 陕西嘉陵江源头 (海拔 1 570 m), 2007-05-26, 朱巽采; 1 ♀, 陕西潼关桐峪镇 (海拔 1 052 m), 2006-05-30, 朱巽采。

分布: 中国 (甘肃、陕西、四川)。



图 11~17 短顶双带叶蜂, 新种 *Tenthredo transversiverticina* Wei et Shang, sp. nov.

11. 成虫 (adult) 12~13. 头部 (head) 11~12. 背面观 (dorsal view) 13. 前面观 (front view) 14. 触角 (antenna) 15. 锯鞘侧面观 (ovipositor sheath, lateral view) 16. 锯腹片 (lancet) 17. 第 6~8 锯刃 (6th–8th serrulae) 比例尺 (scale bars): 11 = 3 mm, 16 = 200 μ m, 17 = 50 μ m

词源: 新种单眼后区很短宽, 以此命名。

鉴别特征 本种与 *T. simlaensis* Cameron, 1899 最近似, 但后眶无淡色宽条斑, 唇基上区、触角窝上突、单眼后区、前胸背板前下角、中胸背板前叶全部黑色, 中胸前侧片淡色横带不贯穿侧板, 腹部 1~8 背板具小三角形中斑; 单眼后区宽长比等于 2.5; 触角第 3 节微弱长于第 4 节; 中胸前侧片具细密刻纹, 无刻点, 光泽微弱; 胸部背板刻点细小、稍密集, 刻点间隙具明显细刻纹, 光泽较弱; 中胸小盾片具钝横脊; 附片宽长比等于 2, 长约 2 倍于单眼直径; 锯刃低弱倾斜突出。后者后眶具淡色宽条斑, 唇基上区、触角窝上突、单眼后区大部、前胸背板前下角、中胸背板前叶后端黄绿色, 中胸前侧片淡色横带贯穿侧板, 腹部 1~8 背板具亚方形中斑, 约等

宽于两侧黑斑; 单眼后区宽长比等于 1.6; 触角第 3 节约 1.3 倍于第 4 节长; 中胸前侧片无细密刻纹, 具稀疏粗大刻点, 光泽强; 胸部背板刻点较大、十分稀疏, 刻点间隙无明显细刻纹, 光泽强; 中胸小盾片无横脊; 附片短宽, 宽长比等于 3, 长约 1.3 倍于单眼直径; 锯刃显著倾斜突出。

根据描述和附图, 可以肯定, Saini (2007) 的 *T. simlaensis* Cameron, 1899 是错误的鉴定。作者已经核对 *T. simlaensis* Cameron, 1899 的正模标本。因此, 印度各邦 *T. simlaensis* Cameron, 1899 的分布数据需要进一步核对。

3 蓝光双带叶蜂 *Tenthredo melanosternum* Saini & Vasu, 1999 中国新纪录种

Tenthredo melanosternum Saini & Vasu, 1999: 134.

检查标本: 1 ♀, 西藏排龙乡大峡谷 (海拔 2 054 m), 2009-06-16, 牛耕耘采; 1 ♀, 云南贡山黑洼底 (海拔 2 000 m), 2009-06-06, 肖炜采。

分布: 中国 (云南、西藏); 印度 (那加兰)。

本种腹部背板黑斑具明显的蓝色光泽, 2~6 节中部淡斑狭窄; 中胸前侧片黑色, 后下角具小型黄绿斑, 后胸前侧片黄绿色; 头胸部背侧黑色, 中胸背板前叶后端、小盾片和附片、后小盾片和其后点斑黄绿色; 头部背侧光滑, 单眼后区宽长比等于 2; 小盾片附片无中脊; 唇基缺口浅弧形。本种腹部背板黑斑具明显的蓝色光泽, 2~6 节中部淡斑狭窄, 与叶蜂属双带种团已知种类均不相同。

4 角斑双带叶蜂 *Tenthredo segregata* Konow, 1908 中国新纪录种

Tenthredo segregata Konow, 1908: 23.

检查标本: 2 ♂♂, 西藏墨脱县 60K (海拔 2 780 m), 2009-06-18, 魏美才、牛耕耘采 (CSCS); 1 ♀, “Sikkim”; “*Tenthredo segregata* sp. nov., Fr. W. Konow, determ. 1907” (SDEI)。

分布: 中国 (西藏); 印度 (锡金)。

本种中胸前侧片黄绿色, 仅上端黑色; 唇基缺口浅小; 头部背侧光滑, 单眼后区宽长比约等于 2; 额区、单眼后区和内眶上半部全部黑色; 小盾片附片具中纵脊; 翅痣暗褐色, 前缘脉黑褐色; 腹部背板黑色, 1~5 背板中部具后部稍扩大的狭窄黄绿色纵斑等, 与叶蜂属双带种团已知种类均不相同。

5 红尾双带叶蜂 *Tenthredo eburata* Konow, 1900

Tenthredo eburata Konow, 1900: 125; Wei et al., 2006: 543.

Tenthredo rubrocaudata Takeuchi, 1936: 74. Syn. nov.

模式标本: 1 ♀, 正模, “Coll. Konow”; “Typus” [red]; “Holotypus” [red]; “*Tenthredo eburata* Knw., Siber. Irkutsk”; “GBIF-GISHym 4403” (SDEI)。1 ♀, 正模, “Tonnai, North-Corea, 23 July 1935, K. Takeuchi” (OPU)。

其它标本: 1 ♀, 河北围场县机械林场, 2000-07-10, 薛怀君采; 5 ♀♀, 1 ♂, 山西五台山佛母洞 (海拔 1 630 m), 2009-07-02, 王晓华, 姚明灿采; 1 ♀, 4 ♂♂, 山西五台山下庄村 (海拔 1 800 m), 2009-07-04, 王晓华, 姚明灿采。

分布: 中国河北 (围场)、山西 (五台山)、四川 (峨眉山、卧龙); 朝鲜, 东西伯利亚 (伊尔库茨克、萨哈林), 芬兰, 爱沙尼亚, 拉脱维亚。

已经比较两种正模, *Tenthredo rubrocaudata* Takeuchi, 1936 与 *Tenthredo eburata* Konow, 1900 体色和构造均相同, 前者应是后者的次异名。

REFERENCES

- Cameron, P. 1899. Hymenoptera Orientalia or contributions to a knowledge of the Hymenoptera of the oriental zoological region. *Memoirs and Proceedings of the Manchester Literary and Philosophical Society*, 43 (3): 1–220.
- Konow, F. W. 1900. Neue Sibirische Tenthrediniden. *Entomologische Nachrichten*, Berlin. 26: 119–126.
- Nie, H-Y and Wei, M-C 2002. Six New Species and Subspecies of the Genus *Tenthredo* L. (Hymenoptera: Tenthredinidae) from Henan.
- Malaise, R. 1931. Blattwespen aus Wladiwostok und anderen Teilen Ostasiens. *Entomologisk Tidskrift*, 52 (2): 97–159.
- Malaise, R. 1945. Tenthredinoidea of South-Eastern Asia with a general zoogeographical review. *Opuscula Entomologica*, 4 (Suppl.): 1–288.
- Saini, M. S. and Vasu, V. 1999. New species of *Tenthredo* L. from India (Hymenoptera: Tenthredinidae). *Polskie Pismo Entomologiczne*, 68: 133–142.
- Singh, B. 1985. Sawflies of genus *Tenthredo* Linn. (Hymenoptera: Tenthredinidae) - two new species from Himachal Pradesh, India. *Annals Biology-India*, 1 (2): 179–183.
- Taeger, A., Blank, S. M. and Liston, A. D. 2010. World catalog of Symphyta (Hymenoptera). *Zootaxa*, Monograph, 2 580: 1–1 064.
- Takeuchi, K. 1936. Tenthredinoidea of Saghalien (Hymenoptera). *Tenthredo. Acta Entomologica*, 1 (1): 53–108.
- Togashi, I. 1963. Descriptions of new species of Symphyta (Hymenoptera) from Japan (3). *Kontyû*, 31 (4): 281–284.
- Wei, M-C and Nie, H-Y 2002. Six New Species of the Genus *Tenthredo* L. (Hymenoptera: Tenthredinidae) from Henan. China Agricultural Science and Technology Press. pp. 154–162.
- Wei, M-C 2006. Argidae, Cimbicidae, Tenthredinidae and Xiphydriidae (In Chinese, abstract in English). In: Li, Z-Z and Jin, D-C (eds.), *Insects from Fanjingshan Landscape*. Guizhou Science and Technology Publishing House, Guiyang. pp. 590–655.
- Wei, M-C, Nie, H-Y and Taeger, A. 2006. Sawflies (Hymenoptera: Symphyta) of China - Checklist and Review of Research. In: Blank, S. M., Schmidt, S. and Taeger, A. (eds.), *Recent Sawfly Research: Synthesis and Prospects*. Goecke & Evers, Keltern. 704 pp.
- Wei, M-C and Niu, G-Y 2009. Two new species of *Potanini* group of *Tenthredo* L. from China (Hymenoptera, Tenthredinidae). *Acta Zootaxonomica Sinica*, 34 (2): 241–247. [动物分类学报]